

2016-2017 Influenza Season Recap

DE Public Health Laboratory 2016-2017 influenza
season recap to date

DPHL October 3, 2016 – May 1, 2017

Still 15% positivity
rate at DPHL as of
5/1/17

2,933 Samples Tested

Predominantly
B/Yamagata
circulating now –
not in trivalent
vaccine

New Castle County: 1,717

Kent County: 273

Overall 34%
positivity rate
(also reflects
known CCMC
positives for
subtyping)

Sussex County: 709

Unknown/Other (out of state): 234

What Flu Viruses were Circulating this year? What was interesting?

- Predominantly Influenza A/H3N2 (699)
- Only 5 Influenza A/H1N1 pandemics
- Predominantly Influenza B, genotype Yamagata for Flu B (129 Yamagata, 27 Victoria).
- Fifteen confirmed flu related fatalities, highest in recent years.
- Two influenza A/B co-infections, one Influenza A/B co-infection fatality.
- Need better way of tracking vaccination to strain typing. Strains frequently came back typed to vaccines, but vaccination information is not often readily available to DPHL.

Influenza Vaccine

- **This season:**
- 2016–2017 influenza vaccine:
 - an A/California/7/2009 (H1N1)–like virus,
 - an A/Hong Kong/4801/2014 (H3N2)–like virus, and
 - a B/Brisbane/60/2008–like virus (Victoria lineage).
- Quadrivalent vaccines will include an additional influenza B virus strain, a B/Phuket/3073/2013–like virus (Yamagata lineage).

- 2017-2018 influenza vaccine recommendations:
 - For H1N1, an A/Michigan/45/2015-like virus* **New**
 - For H3N2, an A/Hong Kong/4801/2014-like virus
 - For B, Brisbane/60/2008-like virus (belonging to the Victoria lineage)
 - Quadrivalent vaccine will include an additional influenza B virus strain a B/Phuket/3073/2013-like virus. (This is a B/Yamagata lineage virus)

DPHL Submission to CDC and CDC Designated Labs

- As part of CDC's "Right-Size" Influenza Surveillance program DPHL continued to send two positive specimens representing the main circulating groups to the New York State Department of Health every/other week (if available)
- Fatalities, and co-infection specimens were immediately sent to CDC.
- **Still some volume issues with specimens, but as long as submitters do not need a diagnostic result, it is still acceptable to test QNS for surveillance purposes. Minimum of 600µl needed.**

What were our Goals for this Surveillance Season? What really happened?

True story:

A 2 month old baby was found passed away in a “Pack n Play.” The medical examiner submitted specimens to DPHL for viral and bacterial testing. The baby tested positive for Flu A, Flu B, and *S. aureus* in the lungs. The immunity of the herd is important!

- Reduce overall positivity through more randomized submission. **Actually, positivity was up about 9% this season.**
- Run CDC Flu rRT-PCR and or Gen-Mark RVP on all outbreaks. **This worked well, and DPHL detected its first Human Metapneumovirus outbreak in a long term care facility.**
- Improve surveillance submissions from Kent County. **This statistic is probably inaccurate, as Bayhealth does not want reported surveillance results and they fall under the “other” category.**
- Help confirm/refute flu cases from rapid tests on the “shoulders” of the season. **This worked well, but many hospitals are moving to Nucleic Acid Amplification Testing (NAAT) for Flu.**

Influenza Anti-Viral Resistance Testing

- DPHL continued to run Pyrosequencing on a subset of influenza A/H1N1 2009 and influenza A/H3N2 specimens.
- All Delaware's specimens for the 2016-17 season were wild-type.
- CDC has implemented Whole Genome Sequencing (WGS) in conjunction with the Wisconsin State Laboratory of Hygiene, the New York State Department of Health (Wadsworth), and the California Department of Health. DPHL submits specimens to Wadsworth where WGS is performed.

Annual Reminders and Information

- DPHL will continue to run influenza testing throughout the summer. Please submit any Influenza Like Illnesses.
- Please remember to try to randomize surveillance as much as possible, but we are more than willing to confirm any positives in the “off” season and the beginning of the new season.
- DPHL supports any/all outbreak testing and can perform the Gen-Mark eSensor Respiratory Virus Panel (RVP) on non-influenza respiratory outbreaks.

Questions or Comments?

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